

# Continued Implementation of Agricultural Nonpoint Source Components of the Lampasas River Watershed Protection Plan



Hill Country Soil and Water Conservation District #534

Final Report TSSWCB Project #17-03

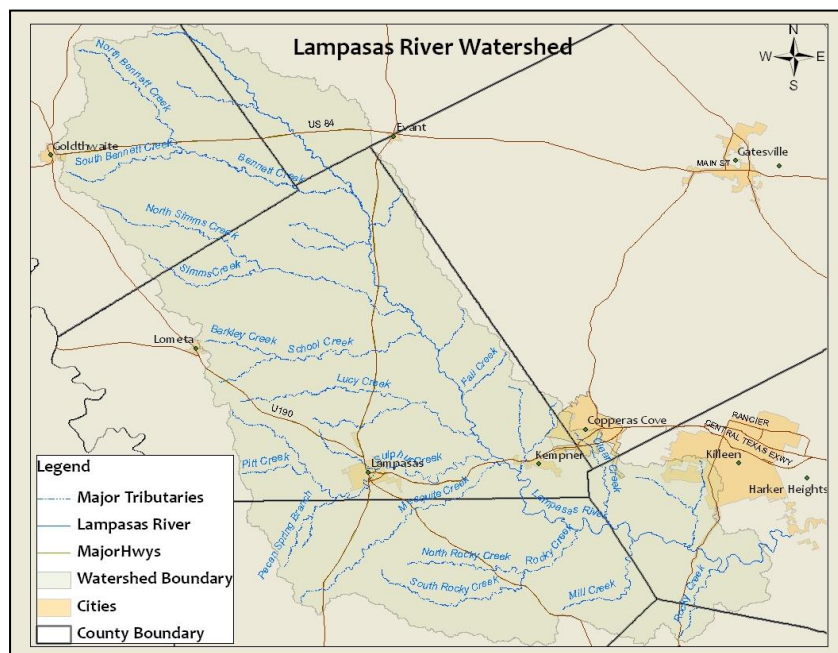
FUNDING PROVIDED THROUGH A CLEAN WATER ACT §319(h)  
NONPOINT SOURCE GRANT FROM THE TEXAS STATE SOIL AND  
WATER CONSERVATION BOARD AND THE U.S. ENVIRONMENTAL  
PROTECTION AGENCY

# Executive Summary

The Hill Country Soil and Water Conservation District (SWCD), working cooperatively with the Texas State Soil and Water Conservation Board (TSSWCB) and the United States Department of Agriculture - Natural Resources Conservation Service (NRCS), provided technical and financial assistance to agricultural producers in the Lampasas River watershed through a Clean Water Act §319(h) nonpoint source grant from the TSSWCB and the U.S. Environmental Protection Agency.

The development, installation, and maintenance of water quality management plans (WQMPs) in the Lampasas River watershed have continued to be a success. Through this project, a District Technician was hired and worked cooperatively with the TSSWCB and NRCS to provide agricultural producers with the opportunity to voluntarily develop water quality management plans (WQMPs) in the Lampasas River watershed to implement best management practices (BMPs), which have a positive impact on water quality in the Lampasas River.

Through this project, a total of 15 WQMPs were developed and implemented on approximately 13,266 acres. A majority of the BMPs installed were Forage and Biomass Planting, Range Planting, Cross Fencing, Prescribed Grazing, livestock water wells, and Brush Management. The District Technician and TSSWCB worked with the SWCDs and local producers to educate them on the WQMP program, proper soil sampling, and BMPs. Implementation of WQMPs has and will continue to be a key component in the overall effort to improve water quality in the Lampasas River watershed.



# Introduction

The Lampasas River (segment 1217) rises in western Hamilton County, 16 miles west of Hamilton, and flows southeast for 75 miles. The river courses through Hamilton, Lampasas, Burnet, and Bell Counties. In Bell County the river turns northeast and is dammed five miles southwest of Belton to form Stillhouse Hollow Lake (Segment 1216). Below Stillhouse Hollow Lake, the Lampasas River flows to its confluence with Salado Creek and the Leon River to form the Little River.

The Lampasas River is commonly characterized by low water levels and is situated within a rural and agricultural dominated landscape. The Cities of Lampasas and Kempner are the only cities situated wholly within the watershed, while the Cities of Copperas Cove and Killeen each drain a portion of their city into the Lampasas River watershed.

According to the 2002, 2004, 2006, and 2008 Texas Water Quality Inventory and 303(d) List, the Lampasas River above Stillhouse Hollow Lake is impaired by elevated bacteria concentrations and does not meet Texas Surface Water Quality Standards for contact recreation. However, the Lampasas River was not listed as impaired on the 2010 or 2012 Integrated Report. The river's delisting occurred because no additional data had been collected for assessment from 2000 until late 2009 and existing historical data no longer met TCEQ's criteria to be included in assessment.

Prior to the river being delisted, Texas A&M AgriLife Research and TSSWCB established the Lampasas River Watershed Partnership in November 2009 as part of TSSWCB project 07-11, *Lampasas River Watershed Assessment and Protection Project*. Through this project, land use was updated, water quality modeling using existing data was conducted, and a WPP was developed to address the bacteria impairment. The development of a WPP was a stakeholder driven process facilitated by AgriLife Research. With technical assistance from AgriLife Research and other state and federal partners, the Steering Committee identified water quality issues that are of particular importance to the surrounding communities. The Steering Committee also contributed information on land uses and activities that were utilized in identifying the potential sources of bacterial impairments and in guiding the development of the WPP. The WPP identified responsible parties, implementation milestones and estimated financial costs for individual management measures and outreach and education activities. The plan also described the estimated load reductions expected from full implementation of all management measures. TSSWCB project 12-09, *Coordinating Implementation of the Lampasas River Watershed Protection Plan*, continues facilitation of the Lampasas River WPP. The timeline for full implementation of all the management measures in the Lampasas River WPP is 10 years and was accepted by EPA in May 2013 and approved by the Steering Committee in September 2013; this project supports that process during the initial 3 years.

As identified during development of the WPP, nonpoint agricultural sources of pollutant loading may be addressed by implementing BMPs on agricultural operations. Agricultural producers,

have been collaborating with SWCDs, TSSWCB, and NRCS to protect the natural resources in Texas for decades. Through the TSSWCB's WQMP Program, farmers and ranchers routinely implement BMPs on their land utilizing financial and technical assistance programs through SWCDs that receive state and federal funds from TSSWCB, EPA, and NRCS. A WQMP is a site-specific plan developed through, and approved by, SWCDs which includes appropriate land treatment practices, production practices, management measures, and technologies that prevent and abate agricultural and silvicultural nonpoint source pollution.

Expanding participation of agricultural producers in WPP implementation is essential to achieve water quality improvement. As an established and well-known local entity, the Hill Country SWCD is uniquely situated to engage and support agricultural producers in watershed restoration and protection efforts, including implementation of appropriate BMPs to address nonpoint source pollution as identified in the Lampasas River WPP.

Technical support from the Hill Country SWCD and NRCS personnel is critical for proper selection and placement of appropriate management measures on individual agricultural properties. However, due to the number of conservation plans that will be needed, a new position dedicated specifically to WQMP development in the watershed will be necessary to provide direct assistance to agricultural producers.

## Program Development

A comprehensive watershed approach focused on the most significant potential sources of NPS pollution contributing to the current impairments was used for WPP development. This project provided funding to support implementation of recommended agricultural management measures identified in the WPP implementation schedule.

In 2014 the TSSWCB partnered with the Hill Country SWCD and utilized federal CWA §319(h) grant funding to provide technical and financial assistance to agricultural producers in the Lampasas River Watershed. The SWCD completed the project and started the current project in 2017 to continue implementation of agricultural nonpoint source components of the WPP. The District Technician is based in the Hill Country SWCD office and worked under the direction of the SWCD, with assistance from the TSSWCB, NRCS, and Texas A&M AgriLife Research, as needed. The District Technician assisted landowners in applying for and obtaining financial incentives to aid in implementation of BMPs prescribed in WQMPs. Once the WQMP was developed, it was sent to the appropriate TSSWCB regional office for technical review and certification. Upon certification of the WQMP, the District Technician worked with the landowners to implement the BMPs prescribed in the WQMP.

The District Technician conducted annual status reviews on WQMPs developed and certified through the course of this project to ensure that landowner's implemented BMPs as specified and agreed to in the WQMP implementation schedule. The District Technician tracked

utilization of obligated financial incentives and assisted landowners in utilizing these funds on schedule.

The District Technician also worked with TSSWCB, NRCS, and AgriLife Research to educate agricultural producers about water quality issues and how WQMPs and BMPs improve water quality. The Technician also attended commodity organization meetings, such as Texas and Southwestern Cattle Raisers Association (TSCRA), Independent Cattlemen's Association of Texas (ICA), Texas Farm Bureau (TFB), and others to educate their members about how BMPs can protect and enhance the value of their operation and achieve water quality goals for the watershed at the same time. The Technician kept in communication with the Lampasas River Watershed Partnership and the watershed coordinator, in order to effectively and efficiently achieve project goals and to summarize activities and achievements made throughout the course of this project.

The District Technician and NRCS worked with landowners to implement BMPs as described in the WQMP. In addition to the development, installation, and maintenance of WQMPs, the District Technician worked with the SWCDs and local producers to educate them on the effective management of their operation, the WQMP program, proper soil sampling, and water quality. The District Technician helped landowners acquire any financial assistance available. Examples of BMPs installed were Nutrient Management (590), Herbaceous Weed Control (315), Conservation Crop Rotation (328), Upland Wildlife Habitat Management (645), Heavy Use Area Protection (561) and Brush Management (314).

#### Range Planting

This practice is the act of planting a mix of grass species on open rangeland needing to be covered by vegetation. The practice increases ground cover and improves soil health and water quality.

#### Prescribed Grazing

This practice is the execution of a grazing plan to give pastures, rangeland, and cropland enough rest from livestock grazing to ensure that adequate amounts of forage covers the ground and is not overgrazed, improving soil health by reducing erosion. This also helps improve and maintain water quality, as well as riparian and watershed function.



### Cross-Fencing

This practice helps divide a producer's property into sections so that a rotational grazing plan can be followed. The fence allows pastures and rangeland to be rested from grazing pressure to allow for vegetation growth.





### Livestock Water Well

This practice provides access to a groundwater supply suitable for livestock watering, fire control, wildlife, and other agricultural uses . Planning of proper storage and pipelines will allow multiple drinking facilities to better utilize available resources.



## Conclusions

The Hill Country SWCD, working cooperatively with the TSSWCB and the NRCS, provided technical and financial assistance to agricultural producers in the Lampasas River watershed through a Clean Water Act §319(h) nonpoint source grant from the TSSWCB and the U.S. Environmental Protection Agency.

The development, installation, and maintenance of WQMPs in the Lampasas River watershed have continued to be a success. There is a need for this project to continue and grow its efforts.

With more funding for financial assistance and more WQMPs developed, significant load reductions and further improvement of water quality can be achieved.

Through this project, a total of 15 WQMPs were developed and implemented on approximately 13,266 acres. Below is a map showing the WQMPs developed and implemented in the watershed.

TSSWCB has partnered with the Hill Country SWCD to continue this effort for another three years. The new project will continue utilizing CWA Section 319(h) grant funding to help landowners implement BMPs in the watershed.



## Water Quality Management Plans Developed and Implemented in the Lampasas River Watershed

